

Technology Requirements for Online Testing

Training Module

Topics

- Site Readiness
- Network Requirements
- Hardware and Software Requirements
- Secure Browser Installation
- Network Diagnostics and Configuration

Objectives

By the end of this presentation, you will be able to:

- Understand your role and responsibilities
- Prepare for administering online tests at your school
- Install the secure browser
- Troubleshoot technical problems during the tests

Technology Coordinator Tasks

- Logins and passwords
- Minimum system requirements
- Secure browser
- Determining system readiness/network capacity
- Troubleshooting technical issues

Network Requirements

Network Connection:

- A stable, high-speed (wired or wireless) network and Internet connection are required for the test.
- The response time for each test depends on your network's bandwidth, number of students simultaneously testing, size of test content, proxy server (if used), and other factors.

Network Requirements

Network Configuration:

- Session timeouts on proxy servers and other devices should be set to values greater than the average scheduled testing time. For example, if test sessions are scheduled for 60 minutes, consider session timeouts of 65–70 minutes.
- Web proxy servers must be configured to NOT cache data received from servers.
- For any device that performs traffic shaping, packet prioritization, or quality of service, the URLs to be used for testing should be given a high priority to ensure the best performance.

Network Requirements

Whitelisting:

Content filters, firewalls, and proxy servers should be configured to allow the URLs for testing sites and applicable non-testing sites.

Network Requirements

Performance Factors:

- Bandwidth
- Number of students simultaneously testing
- Wireless networking configuration
- Secure browser

Network Performance

Bandwidth:

- At least 20K bps bandwidth per student being tested
- Affected by both Local Area Network (LAN) traffic and Internet traffic from the router
- LAN should always be analyzed to determine potential traffic bottlenecks

Network Diagnostics Tool

Number of students simultaneously testing:

- Network performance may slow when large numbers of students are testing at one time.
- Multiply the number of students being tested by 20 Kbps to get an estimate of bandwidth needed, and compare that estimate with the network speed test.
- Perform network analyses at different times to ensure adequate capacity.

Diagnostic Screen

This page allows you to check the **current** bandwidth of your network. Select a test from the drop-down list and enter the maximum number of students likely to test at one time, then click [Run Network Diagnostics Tests].

Your Operating System: **Windows 7**

Your Browser Version: **Firefox v32**

Secure Browser: **false**

Network Diagnostics:

Select Test:

Enter the total number of students you would like to test at one time:

[Run Network Diagnostics Tests](#)

[Return to Login](#)

[TTS Check](#)

Network Performance

Wireless Network Configuration:

Wireless traffic must use encryption.

- Wi-Fi Protected Access II (WPA2)
- Advanced Encryption Standard (AES)

Wireless access points have limits on total bandwidth and number of simultaneous devices in use.

System Requirements

Computers		
Operating System	Minimum Requirements for Current Computers	Recommended Minimum Requirements for New Purchases
Windows XP (service Pack 3), Vista, 7, 8.0, 8.1 Server 2003, 2008, and 2012	Pentium 4 or newer processor that supports SSE2 512 MB of RAM 200 MB hard drive space Minimum screen resolution 1024x768	Pentium 4 or newer processor that supports SSE2 2 GB+ RAM 80 GB+ hard drive Minimum screen resolution 1024x768
Mac OS X 10.5–10.10	Intel x86 processor 512 MB RAM 200 MB hard drive space Minimum screen resolution 1024x768	Pentium 4 or newer processor (10.6–10.10) 2+ GB RAM 80+ GB hard drive Minimum screen resolution 1024x768
Linux Fedora 19, 20, 21 openSUSE 13.1 Red Hat Enterprise Linux 6.5 Ubuntu (LTS)12.04, 14.04	Intel x86 processor 512 MB RAM 200 MB hard drive space Minimum screen resolution 1024x768	Pentium 4 or newer processor 2+ GB RAM 80+ GB hard drive Minimum screen resolution 1024x768

System Requirements

Appropriate Monitor Display

- Monitor settings may need to be adjusted if test items with shaded images are very light or cannot be seen.
- The larger the monitor, the more “real estate” students will have.
- Resolution: 1024 x 768 or better

Supported Mobile Devices

Operating System	Supported Tablets	Browsers for TA Sites	Browsers for Student Sites
Android 4.3, 4.4, 5.0, 5.1	Google Nexus 10 Motorola Xoom Samsung Galaxy Note (2014 edition) Samsung Galaxy Tab 3 and 4 LearnPad Quarto	Native browser Chrome	AIR Mobile secure browser
Chrome 41 to 44	Chromebook	Chrome	AIRSecureTest kiosk application
iOS 7.0, 7.1, 8.0–8.2	iPad 2 iPad 3 Fourth-generation (Retina Display) iPad Air iPad Air 2	Safari	AIRSecureTest Mobile Secure Browser

Secure Browser

- The secure browser prevents students from accessing other computer or Internet applications and copying test information during testing.
- Practice and training tests can be accessed with either the secure browser or with Chrome, Firefox, Safari, Internet Explorer 10 and 11, or most native tablet web browsers.

Secure Browser

- The Student Testing Site requires the use of a secure browser.
- The correct secure browser for each operating system must be downloaded and installed on all computers that will be used for student testing.

Secure Browser

Computer/Device	Secure Browser Location
Windows, Mac, and Linux computers	(enter state specific portal)
Android tablets	Play Store
iPad tablets	App Store
Chromebooks	Chrome Web Store

Secure Browser Installation

Installation Methods:

- Download the secure browser from your portal and install it.
- Download and save the secure browser onto a media device (such as a flash drive), and copy and install the files on each computer.
- Download and save the secure browser to a network folder, and copy and install the files on each computer.

Secure Browser Installation

Windows

MSI file type enables deployment using a number of tools:

- Active Directory Group Policy
- Microsoft SMS
- Microsoft SCCM
- Microsoft WSUS
- Windows NT Batch

Secure Browser Installation

Mac and Linux

Mac

DMG file type enables deployment using Apple Remote Desktop.

- Munki
- Filewave

Linux

TAR file type enables deployment using a number of tools including the following:

- Shell scripts
- Puppet

Secure Browser

Automatic Update Feature

Districts may be able to choose to install the desktop version of the secure browser with an auto-update option.

1. Leave your computers turned on and at the secure browser login and AIR will conduct the updates when the computers are idle.
2. An installation message on the screen will appear with the option to cancel. If not cancelled, the download proceeds unattended.
3. A secure browser restart message on the screen appears. If not cancelled, the browser restarts and installs the latest version.

Note: This feature is optional and may not be offered/supported by your district or state online assessments.

Pop-Ups

- Configure Internet browsers on Test Administrator devices to allow pop-ups from your testing websites.

OS X Secure Browser Configuration

Disabling OS X Features

- Disable Exposé or Spaces
- Disable application launches from function keys
- Disable updates to third party apps
- Disable updates to iTunes

Text-to-Speech

- Voice technology must be available and functioning for students who require this accommodation.
- For Windows and Mac operating systems, default voice packs are generally pre-installed.
- A customized voice pack may be available for Windows computers from TIDE's Voice Pack tab.
- Linux users may need to install a Text-to-Speech package if one was not installed with the operating system.

Text-to-Speech on Mobile Devices

- iPad users will be able to adjust volume, pitch, and speaking rate.
- Chromebook users will be able to adjust volume and speaking rate.
- These settings are also adjustable in the test.
- Currently, these features are not available on Android devices.

Did you hear the English text? Press [Yes] or [No] below.



Select the green button to test your Text-to-Speech settings.
You should hear the following phrase: "This text is being read aloud."
Click [Yes, I heard the voice] if it worked. If it did not work, click [No, I did not hear the voice].

No, I did not hear the voice.

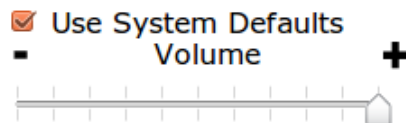
Yes, I heard the voice.

Skip English TTS Check

Sound Settings

Current Voice Pack: native

Use the sliders to adjust the pitch and volume. You will not be able to change these settings once you begin your test.



Help Desk Support

Iowa ELPA21 Help Desk

American Institutes for Research

Tel 1.855.873.5710

Email iowaelpa21helpdesk@air.org

Chat <http://iowaelpa21.portal.airast.org/chat/>

Thank You!

Further Information

- [access the Iowa Education Portal](#)
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